UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,851	04/24/2001	Douglas H. Beeferman	10984-499001	5713

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EXAMINER
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ART UNIT	PAPER NUMBER
2172	

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application N .		Applicant(s)	
Office Action Summary		09/840,851		BEEFERMAN, DOUGLAS H.	
		Examiner		**Art Unit**	
		Cam Y T Truong		2172	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on <u>03 September 2003</u> .

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5</u> .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: .

DETAILED ACTION

1.   Claims 1-42 are pending in this Office Action.

Applicant has amended claims 1-4, 15-18, and 29-32 in the amendment filled on

9/3/03.

Applicant's arguments with respect to claims 1-42 have been considered but are

moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

3.   Claims 1-42 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention.

The added limitation "within a predetermined range of one another in text, the

predetermined range including from zero additional words to a number of additional

words located between the words in the text" in claims 1, 15 and 29 on page 2, lines 3-

5, page 5, lines 9-10 is not supported by the specification. Applicant is advised to

amend the claims by deleting the added limitations or amend the specification to

support to the added limitation in the claims. Applicant is also reminded that no new matter should be added.

The added limitation "within a predetermined range of one another" in claims 2-4, 16-18 and 30-32 on page 2, lines 14-15, page 3, lines 2-6, page 6, lines 1-8, page 9, lines 4-12 is not supported by the specification. Applicant is advised to amend the claims by deleting the added limitations or amend the specification to support to the added limitation in the claims. Applicant is also reminded that no new matter should be added.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1, 9-13, 15, 23-27, 29, 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al (USP 6405188) in view of Poznanski et al (or hereinafter "Poznanski") (USP 6397174).

As to claims 1, 15, Schwartz teaches the claimed limitations:

"receiving a phrase comprised of the words" as (col. 9, lines 45-46);

"retrieving the data for the words from the database in response to receiving the phrase" as (col. 4, lines 35-45);

"and determining, based on the data, whether to perform a text search for the phrase as a whole or for the words individually" as if the training data had a query President Clinton, this query would be performed on the query engine. Next, the system trainer generates a new query. In this step, the query engine has returned a predetermined number e.g., 5 of the most relevant documents for each query found in the training data. In summary, the improved IR system estimates how much more likely a particular query word to appear in a document given that the document is relevant to the query and given features of the query word, such as the form of the word, whether the word was in the original user query, how many of the original retrieved documents e.g., 3 out 5 in which this word occurs, and the fraction of the documents out of all of the documents that contain this word. This information shows that the system determines the training data to perform a text search for the words individually (col. 7, lines 20-60).

Schwartz does not explicitly teach the claimed limitation "establishing a database containing data corresponding to a probability that words occur within a predetermined range of one another in text, the predetermined range including from zero additional words to a number of additional words located between the words in the text". However, Schwartz teaches each document in the database corresponding to a probability i.e., doc 1 Smoking is corresponding to 0.98 (col. 5, lines 20-67; col. 6, lines 1-40). Poznanski teaches measuring of probability for each set which includes all of whose words in the input text and the words of each if any set containing more than one word constitute a collocation. The words of the collocation are adjacent to each other in the input text or not adjacent to each other in the input text. In the case of a

two word collocation such as the English phrasal verb make up, all the instances where these two words appear in this order in a sentence are collected. Each occurrence is classified for whether it is a positive or negative instance of this collocation (in any sense) and, from this, a frequency distribution f_{make}.sub..sub.- - .sub.up (d) over the number of words separating the elements of this collocation can be plotted. This may be represented as: f_{make}.sub..sub.-- .sub.up (d): make_V<d>up_APART. If probability distributions t_{make} and t_{up} have been assigned to the two elements in the sentence, the probability that the left-hand side matches a collocation of the form make . . . .sub.n UP where the words make and up are separated by n words is: t_{make} (v). t_{up} (APART). f_{makeup} (n). The above information shows that the system calculates a probability of words occurs within a range including zero additional words to a number of additional words located between the words in the text (col. 1, lines 38-39; col. 2, lines 1-5; col. 6, lines 46-60).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Poznanski's teaching of calculating probability of two adjacent words and words are separated by n-words in document to Schwart's system in order to allow users to search/retrieve phrase or idioms in any sense correctly.

As to claims 9, 23 and 37, Schwartz teaches the claimed limitation "the words comprise two or more words in series" as (col. 9, lines 45-46).

As to claim 10, 24 and 38, Schwartz teaches the claimed limitation "if it is determined .....the text search for the phrase as a whole" as (col. 7, lines 10-55).

As to claims 11, 25, 39, Schwartz teaches the claimed limitation "performing the text search for the words .....the text search for the phrase as a whole" as (col. 7, lines 10-55).

As to claims 12, 26, 40, Schwartz teaches the claimed limitation "if it is determined to perform the text search for the words individually, the method further comprises: performing the text search for the words individually" as (col. 7, lines 20-40).

As to claims 13, 27, and 41, Schwartz teaches the claimed limitation "issuing a message, based on a result of the determining.....text search for the phrase as a whole or for the words individually based on a response to the message" as (col. 6, lines 20-67; col. 7, lines 10-40).

As to claim 29, Schwartz teaches the same claimed limitations in claims 1 and 15, except the claimed limitation "a memory that stores executable instructions; a processor that execute the instruction" as (col. 4, lines 53-65).

6.   Claims 2-5, 16-19, 30-33 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Schwartz et al (USP 6405188) in view of Poznanski and further in

view of Chou et al (USP 6505151).

As to claims 2, 16 and 30, Schwartz teaches the claimed limitation "searching

through text from one or more documents" as (col. 3, lines 15-45). Schwartz fails to

teach the claimed limitation "determining a metric indicative of the probability that the

words will occur within a predetermined range of one another in the text of the one or

more documents". However, Schwartz teaches probability of particular words being

related to a particular topic (col. 5, lines 20-25). Poznanski teaches If probability

distributions t.sub.make and t.sub.up have been assigned to the two elements in the

sentence, the probability that the left-hand side matches a collocation of the form make

. . . .sub.n UP where the words make and up are separated by n words is: t.sub.make

(v). t.sub.up (APART). f.sub.makeup (n).   The above information shows that the

system calculates a probability of words occurs within a range of one another (col. 6,

lines 46-60).   Chou teaches the ratio of the n-word combinations are calculated as

word1/word2 = 22484/2778 =12.6 to (col. 7, lines 55-67).

It would have been obvious to a person of an ordinary skill in the art at the time

the invention was made to apply Chou's teaching of ratio of the n-word and

Poznanski's teaching of probability of words are separated by n wors to Schwartz's

system in order to improve text search effectively and to search/retrieve noun-phrases

or idioms in any sense correctly.

As to claims 3, 17 and 31, Schwartz discloses the claimed limitation subject matter in claims 1, 15 and 29, except the claimed limitation "the metric is determined based on a probability that the words will occur within a predetermined range of one another and a probability that the words will occur individually". However, Schwartz teaches probability of particular words being related to a particular topic (col. 5, lines 20-25). Also, Poznanski teaches If probability distributions $t.sub.make$ and $t.sub.up$ have been assigned to the two elements in the sentence, the probability that the left-hand side matches a collocation of the form make . . . .$sub.n$ UP where the words make and up are separated by n words is: $t.sub.make$ (v). $t.sub.up$ (APART). $f.sub.makeup$ (n). The above information shows that the system calculates a probability of words occurs within a range of one another (col. 6, lines 46-60). Chou teaches the ratio of the n-word combinations i.e., 1-word combination is calculated as word1/word2 = 22484/2778 =12.6. and 5-word combination word 1/word 2 = 1/1/=1 (col. 7, lines 55-67).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Chou's teaching of ratio of the n-word and Poznanski's teaching of probability of words are separated by n words to Schwartz's system in order to improve text search effectively and to search/retrieve noun-phrases or idioms in any sense correctly.

As to claims 4, 18 and 32, Schwartz discloses the claimed limitation subject matter in claims 1, 15 and 29, except the claimed limitation "wherein the metric comprises a ratio of the probability that the words will occur within a predetermined

range of one another and the probability that the words will occur individually".

However, Schwartz teaches probability of particular words being related to a particular

topic (col. 5, lines 20-25). Also, Poznanski teaches If probability distributions

t.sub.make and t.sub.up have been assigned to the two elements in the sentence, the

probability that the left-hand side matches a collocation of the form make . . . .sub.n UP

where the words make and up are separated by n words is: t.sub.make (v). t.sub.up

(APART). f.sub.makeup (n). The above information shows that the system calculates

a probability of words occurs within a range of one another (col. 6, lines 46-60). Chou

teaches the ratio of the n-word combinations i.e., 1-word combination is calculated as

word1/word2 = 22484/2778 =12.6 and 5-word combination word 1/word 2 = 1/1/=1 (col.

7, lines 55-67).

It would have been obvious to a person of an ordinary skill in the art at the time

the invention was made to apply Chou's teaching of ratio of the n-word and

Poznanski's teaching of probability of words are separated by n words to Schwartz's

system in order to improve text search effectively and to search/retrieve noun-phrases

or idioms in any sense correctly.

As to claims 5, 19 and 33, Schwartz teaches the claimed limitation "the one or

more documents comprise World Wide Web pages" as (col. 4, lines 45-52).

7.   Claims 6, 20 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Schwartz et al (USP 6405188) in view of Poznanski and further in view of Turtle et

al (USP 5488725).

As to claims 6, 20 and 34, Schwartz and Poznanski disclose the claimed

limitation subject matter in claim 1, except the claimed limitation "comparing the data to

a predetermined threshold.....performing the text search for the words individually if the

data does not exceed the predetermined threshold". However, Schwartz teaches

retrieving documents (col. 1, lines 25-30). Turtle teaches that phrases are treated in a

manner similar to proximity terms, except that a document, which does not contain the

full phrase receives a partial score for a partial phrase. For example, if a query

contains the phrase Federal Tort Claims Act and a document contains the phrase tort

claims but not Federal Tort Claims Act, the document will receive a score based on

the frequency distribution associated with Tort Claims. FIG. 8 is a flow diagram

illustrating the process of handling partial matches. As shown at step 120, the full

phrase is evaluated against the collection as heretofore described. The inverse

document frequency $idf.sub.i$ is determined for the full phrase step 122, and if $idf.sub.i$

is greater than a predetermined threshold e.g., 0.3 the maximum belief achieved for

any subphrase or single term is selected as the belief for the partial phrase step 124. If

$idf.sub.i$ is smaller or equal to the threshold value 0.3, the preselected default belief 0.4

is assigned to the documents containing the partial phrase step 126 (col. 19, lines 43-

60).

It would have been obvious to a person of an ordinary skill in the art at the time

the invention was made to apply Turtle's teaching of phrases into Schwartz's system

and Poznanski's system in order to perform phrase searching and word searching.

8.   Claims 7-8, 21-22 and 35-36 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Schwartz et al (USP 6405188) in view of Poznanski and further in

view of Turtle et al (USP 5488725) and Wong et al (USP 6128613).

As to claims 7, 21 and 35, Schwartz, Poznanski and Turtle disclose the claimed

limitation subject matter in claim 6, 20, and 34, except the claimed limitation "wherein

the text search is performed on another database". However, Schwartz teaches

retrieving any items of information include web sites, articles, and other information

sources (col. 4, lines 45-53). Also, Wong teaches storing documents on databases

(col.1, lines 45-50).

It would have been obvious to a person of an ordinary skill in the art at the time

the invention was made to apply Wong's teaching of storing documents on databases

to Schwartz's system, Poznanski's system and Turtle's system in order to allow

searching/retrieving any document on different databases and provide the most relevant

documents to a user.

As to claims 8, 22 and 36, Schwartz, Poznanski and Turtle disclose the claimed

limitation subject matter in claim 7, 21, and 35, except the claimed limitation "wherein

the other database comprises Web databases on the Internet". However, Schwartz

teaches retrieving any items of information include web sites, articles, and other

information sources (col. 4, lines 45-53). Also, Wong teaches storing documents in

databases i.e., web on Internet (col. 1, lines 64-67; col. 2, lines 1-5).

It would have been obvious to a person of an ordinary skill in the art at the time

the invention was made to apply Wong's teaching of storing storing documents in

databases i.e., web on Internet to Schwartz's system, Poznanski's system and Turtle's

system in order to search/retrieve documents easily.

9.   Claims 14, 28 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Schwartz et al (USP 6405188) in view of Poznanski and further in view of Husick et

al (USP 5717914).

As to claims 14, 28 and 42, Schwartz and Poznanski discloses the claimed

limitation subject matter in claim 1, 15 and 29, except the claimed limitation "wherein the

one or more documents comprise a past query log". Schwartz teaches retrieving

documents (col. 9, lines 64-65). Husick teaches a query log table database 119 within

the accounting database 119 is used by data center 110 (col. 36, lines 64-67).

It would have been obvious to a person of an ordinary skill in the art at the time

the invention was made to apply Husick's teaching of a query log table database 119

within the accounting database 119 is used by data center 110 to Schwartz's system

and Poznanski's system in order to log database during processing queries.

Conclusion

10.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam-Y Truong whose telephone number is (703-605-1169). The examiner can normally be reached on Mon-Fri from 8:00AM to 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu, can be reached on (703-305-4393). The fax phone numbers for the organization where this application or proceeding is assigned is (703-746-7238).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703-305-

3900).

CY

11/18/03

SHAHID ALAM
PRIMARY EXAMINER